

DX-EMT Magnetostrictive Level Transmitter is a float type level sensor to be used measuring the level of liquids; designed especially for the difficult processes. Mounts vertically and can locate the very middle point of two opposite magnetic force fields by emitting signals. Therefore, no calibration or adjustment will be needed after the first set, even with the power cuts. Furthermore, it's sensing element is in the body which prevents the wearing effects of the usage, sustains long term durability by avoiding the physical contact.

Areas of application :

Fuel Industry : Gasoline, diesel and liquid natural gas applications

Chemical Liquid Facilities : Pharmaceutical industries, biological engineering

and similar chemical liquid mixing tanks

Water Management Facilities : Dam, Waste water sanitation facilities for real time monitoring

Food and Beverage Facilities : High sensitivity level monitoring for tanks contains liquid



Certification



II 1/2G Ex db IIC TX¹ Ga/Gb For Gas

II 1/2D Ex (ta/tb)*³ IIIC TX² Da/Db For Dust

(-)20 °C...(+)60 °C IP66

* Have a look at the temperature class chart.

Technical Specifications :

Material to Measure	Liquid
Power Supply	24 VDC ±10%
Output	0...10V, 4...20mA (Std.), 0...20mA, 10...0V, 20...4mA, 20...0mA
Resolution	16 bit DAC Output ±0,02% Full Measurement (Min. 100 µm)
Repeatability	±0,005% Full Scale
Measuring Length (L)	100...2000mm
Velocity	< 10m/s
Sampling	2 kHz (Value can change by stem lenght.)
Max. Consumption	50mA -90mA (Value can change by stem lenght.)
Max. Output Noise	< 5 mVpp
Max. Output Value	10.5 V
Update Time	0,5 ms...1000 m / 0,8 ms...2000 m
Permissible Applied Voltage	Available (up to -30 VDC)
Over Voltage Protection	Available (up to 40 VDC)
Connection (R)	2" BSP Std.
Housing Material	Aluminium , B21x
Connection Material	304 Stainless steel Std.
Pipe Material	304 Stainless steel Std.
Electrical connection	Cable, M12-5Pin Socket
Protection Class (EN 60529)	IP 66 / 68
Test	EMC , Low Voltage
Mak. Tencile Force	Max. 40 Nm
Working Temperature	Max. 125 °C
Working Pressure	Max. 30 bar
Ambient Temperature	(-)20°C / (+) 60°C

DX-EMT

MAGNETOSTRICTIVE LEVEL TRANSMITTER

EMT

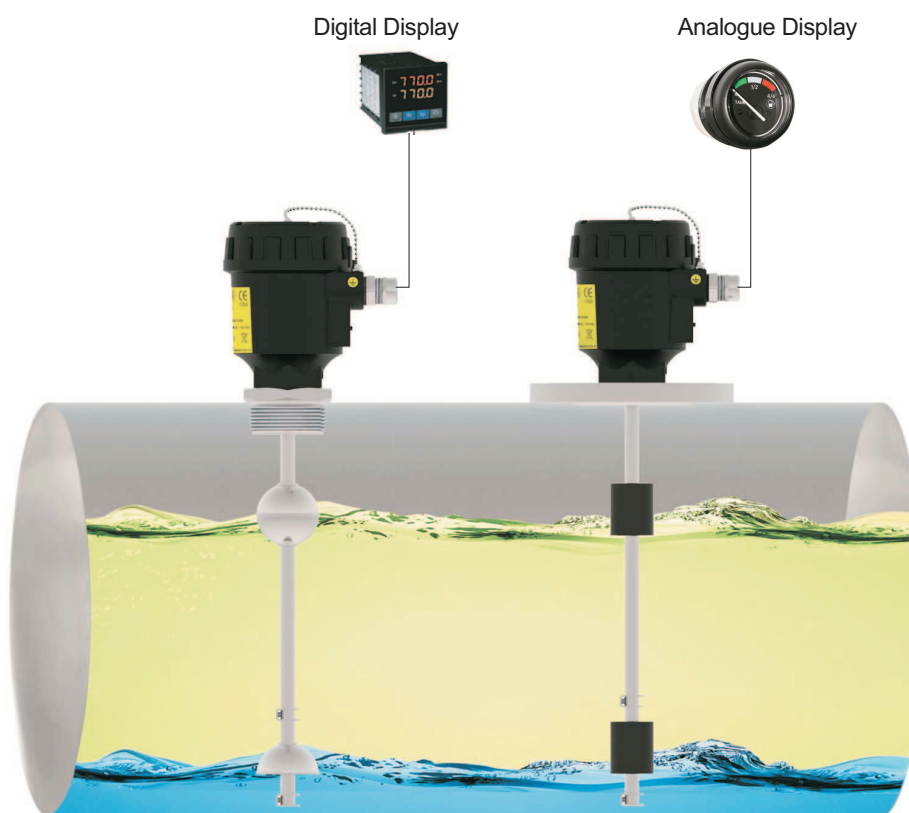
Advantages :

- * High accuracy / precision (16 bit)
- * Long-working use
- * Short response time
- * Output signal options
- * Easy setup
- * IP66 / 68 Protection class

CE 2284



Applications Example :



Housing :

ORDER CODE	TYPE	MATERIALS	PROTECTION CLASS	TEMPERATURE (°C)	DIMENSION a x b x c (mm)
704	B21x	Aluminium	IP 66 / 68	(-) 40...(+) 200	132 x 104

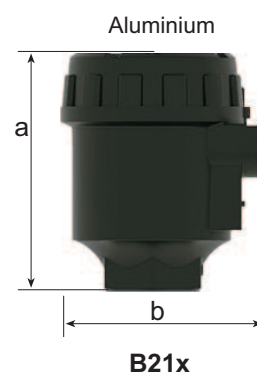
Cover Seal : NBR Nitrile Rubber 120 °C, Opt. FPM (Viton) 200 °C)

EU-Type Examination Certificate Number : TSE 22ATEX 0175U

The marking of the equipment :



II 2G Ex d IIC Gb
II 2D Ex tb IIIC

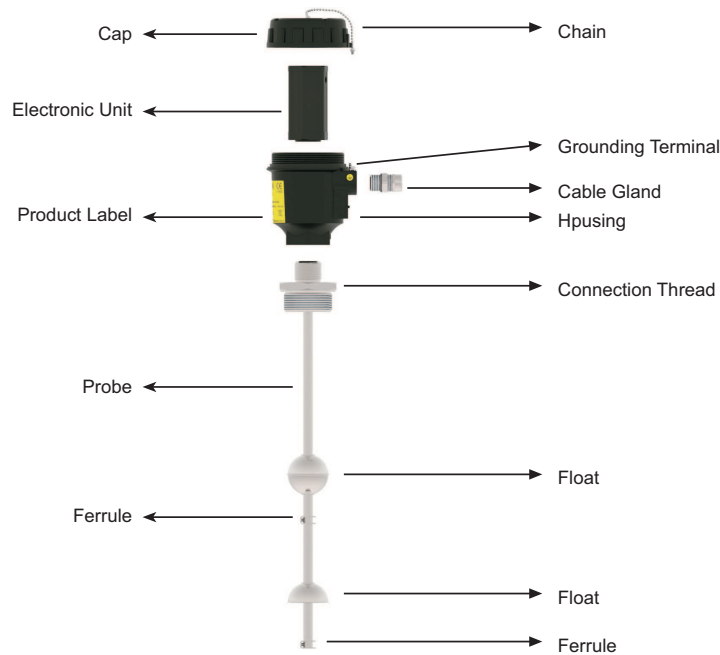


Protection Case :



Material: 304 Stainless steel
Welded Production
Opening - Closing Hinged
For protection of switch from external conditions.

Parts :



Label Information:

Product Label

Manufacturer Brand enSim sensors

Product Name Level Transmitter

ATEX Classes II 1/2 G Ex db IIC Tx Ga/Gb
II 1/2 D Ex (ta/tb) IIIC Tx³ Da/Db
(-)20 °C...(+60 °C IP66)

Explosive Protection Area Ex

Approval Sign. CE 2284

Warning Symbols

Manufacturing Website www.ensim.com.tr

Model Type : DX-EMT 0-704-80-0012-001-13-900-113-19/0

Power Supply : 24 VDC ± %10

Output : 4-20 mA Two Wires

Process Temp. / Press. : Max. 125 °C / Max. 30 bar

T (Ambient) : (-)20 °C...(+60 °C

Mech. Conn. / Length (mm) L : 2" BSP / 900

S.N. : IE23030050-0008

MADE IN TURKIYE

Insulation Label

Metal Label

Manufacturer Name LONCA A.Ş.

Manufacturer Address Ferhatpaşa Mah. 37. Sok. No:78A
34888 Ataşehir - İSTANBUL / TÜRKİYE

Explosive Protection Area Ex

ATEX Classes TSE 22ATEX0175U
II 2 G Ex d Gb
II 2 D Ex tb IIIC
-20 °C ≤ Tamb ≤ +40°C, IP66 / IP68 (2m)

Features

Model Type B21x 16A 240 VAC 50 / 60 Hz

Serial Number S.No: IE22030095-0014

IE 22 03 0095 - 0014

Product Number

System Number

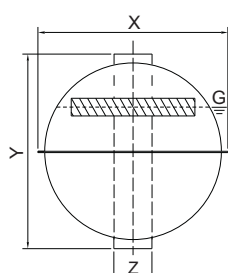
Month

Year

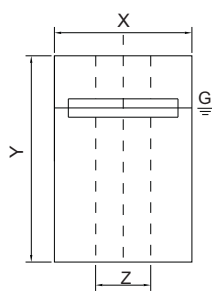
Work Order

Note : If the ATEX certificate metal label is damaged,
you can contact the manufacturer with the serial number.

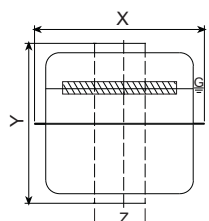
Float :



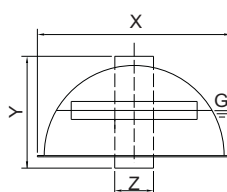
**S5A / S6A
S40A / S41A / S53A**



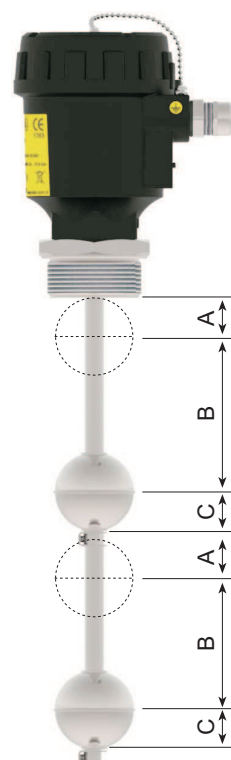
P6 / P7 P9



**S1Y / S1A / S7A / S17A
S10Y / S11A / S54A**



S42A / S52A



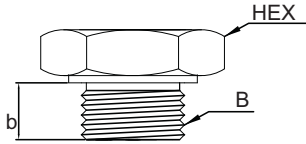
Minimum Distances

ORDER CODE	TYPE	MATERIAL	X	Y	Z	PIPE DIAMETER	MAX. PRESSURE (bar)	MAX. TEMPERATURE (°C)	DENSITY (g/cm³)	A	B	C
0104	S5A	316 St. St.	73	73	20	16	30	150	0.65	50	99	50
0105	S6A	316 St. St.	73	73	17	15	30	150	0.65	50	99	50
0106	S7A	316 St. St.	43	52	15	13	30	150	0.88	34	68	34
0111	S17A	316 St. St.	52	35	15	13	30	150	0.85	39	78	39
0113	S40A	316 St. St.	55	55	15	13	30	150	0.80	42	82	42
0114	S41A	316 St. St.	55	55	15	13	30	150	0,9	42	82	42
0115	S42A	316 St. St.	55	30	15	13	20	150	1,2	42	55	42
0118	S52A	316 St. St.	73	40	20	16	20	150	0,9	50	65	50
0119	S53A	316L St. St.	52,5	50,2	15,5	14	10	200	0,6	42	82	42
0120	S54A	316L St. St.	51	61,2	15,5	14	10	200	0,47	50	90	50
0203	P6	PU	35	42	15	13	1	80	0.65	35	65	40
0204	P7	PU	44	50	18	15	1	80	0.40	38	70	50
0213	P9	PP	46	44	17	15	5	80	0.65	38	76	38

All dimensions are stated as mm.

Mechanical Connections:

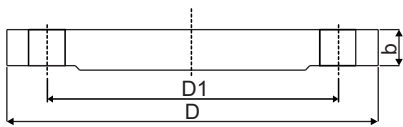
Thread (Connection has been welded with sensor)



(ISO228-1)

Order Code	Dimension B	HEX (mm)	Thread Length b (mm)
0006	1" BSP	41	23
0008	1 1/4" BSP	51	23
0010	1 1/2" BSP	60	23
0012	2" BSP	70	23
0307	M18x1,5	46	25
0308	M20x1,5	46	25

Flanged (Connection has been welded with sensor)



Order (ISO1092-1)

Order Code	PN 16	D (mm)	D1 (mm)	b (mm)
0502	DN 25	165	85	16
0503	DN 32	140	100	16
0505	DN 50	165	125	18
0507	DN 80	200	160	20
0508	DN100	220	180	20

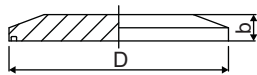
Order (ISO1092-1)

Order Code	PN 40	D (mm)	D1 (mm)	b (mm)
0702	DN 25	115	85	18
0703	DN 32	140	100	20
0705	DN 50	165	125	20
0707	DN 80	200	160	20
0708	DN 100	235	190	24

Order (ANSI B16.5)

Order Code	150 LBS	D (mm)	D1 (mm)	b (mm)
1005	DN 50	152,4	121	19
1006	DN 65	177,8	139,7	22,2
1007	DN 80	190,5	152,4	23,8
1008	DN 100	228,6	157,2	23,8

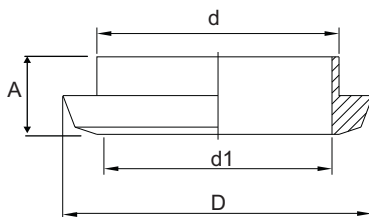
Clamp (Connection has been welded with sensor)



Order (ISO2852)

Order Code	Dimension	D (mm)	b (mm)
1501	DN 32	50,5	15
1502	DN 50	64	17
1503	DN 65	91	17

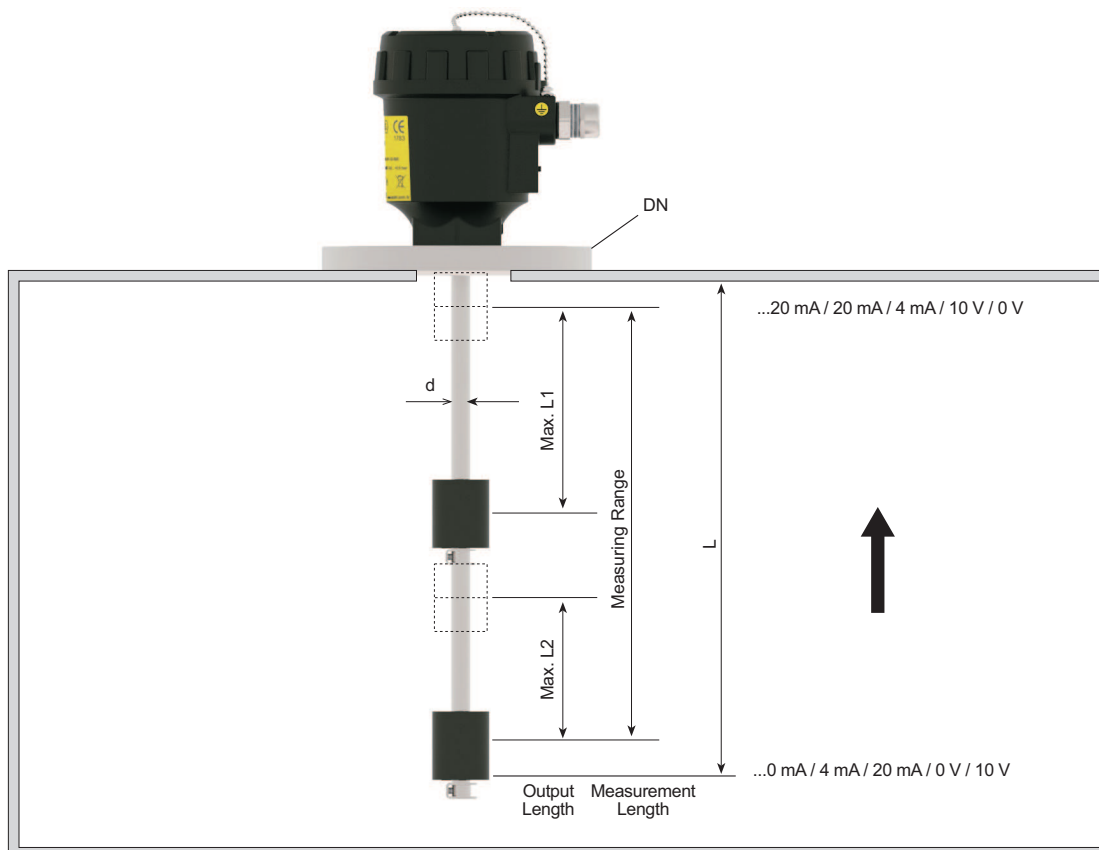
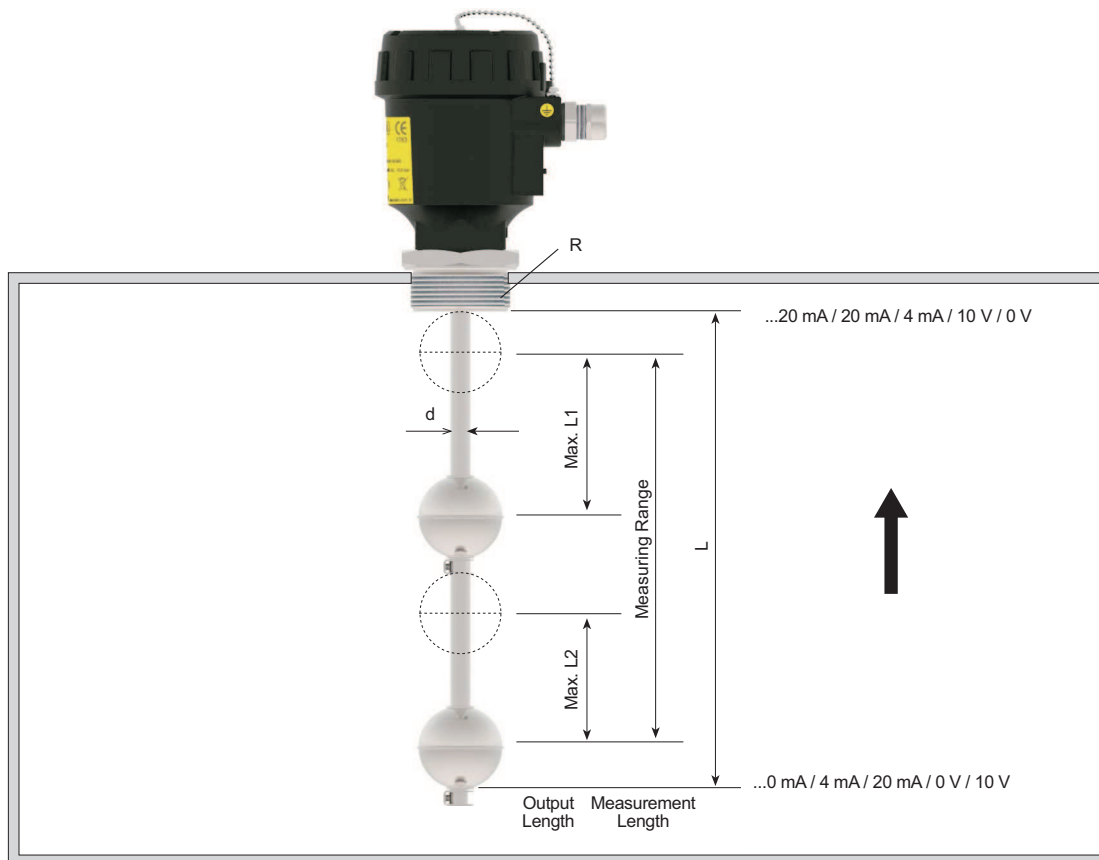
Dairy (Connection has been welded with sensor)



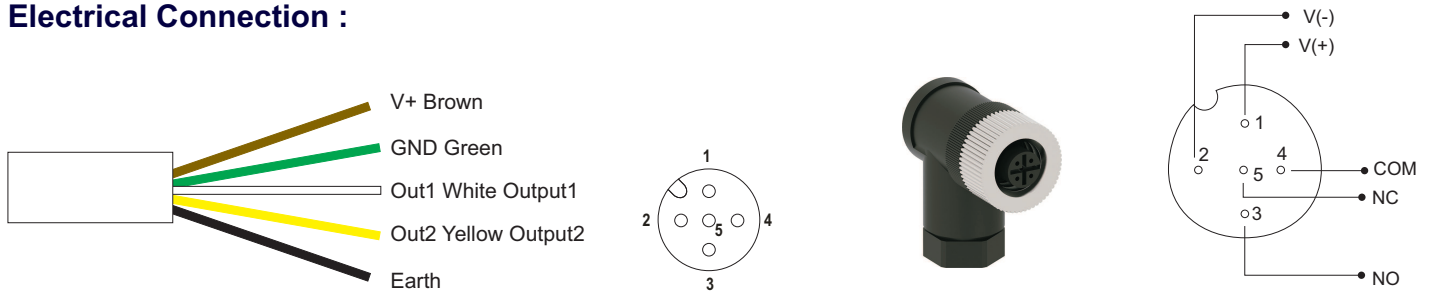
Order

Order Code	Dimension	Dimension D (mm)	d1 (mm)	A (mm)
1600	DN 40	56	48	13
1601	DN 50	68	61	14
1602	DN1 00	121	114	20

Sample Models:



Electrical Connection :



Temperature Class Table

STD. MODEL	DX-EMT (Metal)
Working Temperature	(-) 40 °C... (+) 130 °C)
Without opening the cover standby time	30 min.

Thermal Protection Insurance is 105 ° C

(-) 20°C < T Ambient < (+) 60°C		Working Temperature :(-) 20...(+) 130°C	GROUP II
DX-EMT (Metal)			
T Ambient MAX. AMBIENT TEMPERATURE ZONE 21 / 1	T Process MAX. PROCESS TEMPERATURE ZONE 20 / 0	TEMPERATURE CLASS	
60°C	<80°C	T6	
60°C	<95°C	T5	
60°C	<130°C	T4	

(-) 20°C < T Ambient < (+) 30°C...(+) 60°C		Working Temperature :(-) 50...(+) 60°C	GROUP III
DX-EMT (Metal)			
T Ambient MAX. AMBIENT TEMPERATURE ZONE 21 / 1	T Process MAX. PROCESS TEMPERATURE ZONE 20 / 0	TEMPERATURE CLASS	
60°C	<60°C	T60°C	

Order Form : Please consider sample models when coding

1 MODEL

Standard Version.....DX-EMT

2 CERTIFICATE

None.....0 (EN10204-3-1) Material Certification.....1

3 HOUSING

Aluminium Housing , B21x , IP 66 / 68.....704

4 ELECTRICAL CONNECTION

M12-5 Pin.....71 PTFE Cable (Max. 230 °C).....83
PVC Cable (Max. 60 °C).....80 Special Cable.....x
PVC Cable (Max. 105 °C).....81 Special Socket.....x
Silicon Cable (Max. 200 °C).....82

5 CONNECTION (Connection has been welded with sensor)

Thread (ISO 228-1)	Clamp (ISO 2852)	ISO Flange (1092-1)	ASA Flange (B16.5)
Thread 1" BSP.....0006	DN 25 - PN 16 ... 1501	DN 25 - PN 40 ... 0702	DN 50 - 150 lb ... 1005
Thread 1 1/4" BSP.....0008	DN 32 - PN 16 ... 1502	DN 32 - PN 40 ... 0703	DN 65 - 150 lb ... 1006
Thread 1 1/2" BSP.....0010	DN 50 - PN 16 ... 1503	DN 50 - PN 40 ... 0705	DN 80 - 150 lb ... 1007
Thread 2" BSP.....0012		DN 80 - PN 40 ... 0707	DN 100 - 150 lb ... 1008
Thread M18 X 1,5 mm.....0307		DN 100 - PN 16 ... 0708	
Thread M20 X 1,5 mm.....0308			

6 CONNECTION MATERIAL

304 Stainless Steel 001 Special.....x
316 Stainless Steel.....002

7 PIPE DIAMETER (mm) d

13 mm.....13 Special.....x

8 PIPE MATERIAL

304 Stainless Steel 001 Special.....x
316 Stainless Steel.....002

9 STEM LENGHT (mm) L

.... mm Note: From the connection, including the thread.

10 FLOAT TYPE

Select from table Note: It must be selected according to the connection and radius.

11 NUMBER OF FLOAT

Select from table Note: From the connection, including the thread.

12 OUTPUT (In Both)

4-20 mA Two Wires.....19 0-10 V Three Wires.....21
4-20 mA Three Wires.....20 0-20 mA Three Wires.....22
Special.....x

13 OPTIONAL

None...../ 0 Special.....x
Shelter (for the outside of the tank) 304 St.St... / K

SAMPLE

DX-EMT -0704-81-009-01-13-01-1000mm-113-2-19/0
Magnetostrictive Level Transmitter , 2" BSP , L=1000mm , Two Ø52 Float / 4-20mA